LEGISLATIVE SERVICES AGENCY
OFFICE OF FISCAL AND MANAGEMENT ANALYSIS

301 State House
(317)232-9855

ADMINISTRATIVE RULE
FISCAL IMPACT STATEMENT

PROPOSED RULE: 02-321 **DATE PREPARED:** Mar 11, 2003
STATE AGENCY: Indiana State Department of Health **DATE RECEIVED:** Jan 13, 2003

FISCAL ANALYST: Mike Molnar
PHONE NUMBER: 317-232-9559

Digest of Proposed Rule: This rule adds 410 IAC 6-8.2 to establish the requirements pertaining to the disposition of excremental and sewage matter through the design, installation, construction, maintenance, and operation of commercial facility, residential, cluster, and experimental and alternative technology onsite sewage systems. It repeals 410 IAC 6-8.1 and 410 IAC 6-10 effective 30 days after filing with the Secretary of State.

Governmental Entities: This rule may increase new construction costs for government facilities. The construction costs may increase if the new facility construction occurs in one of the specified counties and requires an onsite sewage system. The number of new government facilities impacted by the provisions of this rule is currently unknown and contingent upon administrative action. Cost to the state is dependent upon type and size of septic system required if other sewage treatment options are not readily accessible.

Local Departments of Health: This rule will increase local health department costs. These costs are due to three reasons: (1) Revision of local septic and onsite waste management ordinances, (2) Increase in the minimal number of soil borings, and (3) Septic maintenance contract monitoring.

(1) The implementation of this rule will require local health departments to redraft local septic and onsite waste management ordinances to comply with the Department's rule. The Department requires local departments to submit these revised ordinances for approval. Elkhart County estimates that this provision will cost approximately $10,000-$12,000. Costs will vary by locality due to staffing cost and the current ordinance.

(2) The rule requires that at least three soil borings are to be drilled at a proposed septic site. This may increase the number of soil samples taken at each site in determining septic field size and type. Local department staff state that the number of borings taken is contingent upon professional judgement, and varies according to site. Cost to the department is contingent upon whether the department takes soil samples as part of the permitting process or whether the department requires the permittee to hire an outside contractor to take samples.

(3) This rule also requires local health departments to monitor whether new septic systems have appropriate maintenance contracts. This will increase the number of active permits that local departments monitor. Local health departments may require additional staff to monitor these new systems. Any increase in expenditures or staff resources is contingent upon administrative action.

Regulated Entities: *Summary:* This rule will impact new home owners, new commercial development owners, and septic tank manufacturers. Home owners and commercial facility owners may bear the cost of the requirements in the form of higher septic system costs. The increased cost estimates are presented below: ***(1)*** New septic system design costs, $8.3 M-8.5 M; ***(2)*** Denitrification costs, $10.6 M-$15 M plus $345,000 to $430,000 per year for maintenance; and ***(3)*** Septic tank modification costs, $93,500 - $4.2 M.

Total Estimated Initial Cost to regulated entities ranges from $19.3 M to $28.1 M.

Background Information:

(1) New Design Costs: The proposed rule contains several equipment provisions in addition to current regulations. These provisions include additional soil boring, a dual compartment septic tank, outflow filter, additional riser for maintenance access, two watertight clamp fittings for inlet and outlet, six watertight fittings for inlet and outlets of distribution boxes, and various backfill and placement requirements of septic tanks. This list of requirements pertains specifically to conventional gravity-flow systems. Additional requirements apply to flood-dosed, sand mound, and conventional systems with perimeter drain. ***Estimated Cost:*** Range from $8.3 M to $8.5 M.

(2) Denitrification Costs: This rule requires that new construction in certain areas of the state must include a secondary treatment system for the removal of nitrate from the wastewater. The cost of the secondary treatment systems vary by application and manufacturer. Three manufacturers currently produce systems that are anticipated to be used: (1) Earthtek, (2) Orenco, and (3) Zoeller systems. In addition, constructed wetlands could be used as an alternative as well (however the permit review process for these tends to be longer, and costs are more site specific). Total annual cost may decrease due to technical advances and decreasing manufacturing costs.

Costs of secondary treatment systems vary according to capacity. An Earthtek system for a three-bedroom house costs between $6,500 and $11,500 installed. Commercial secondary treatment costs vary depending upon industry type and facility size. Estimates for commercial applications range from $10,000 to the hundreds of thousands of dollars. In addition, both residential and commercial systems require continuous monitoring and maintenance. Estimated cost per unit for monitoring and maintenance is approximately $300 for residential and $400 to thousands of dollars for commercial.

The Department of Health prepared estimates of the number of new permits each year that would require secondary treatment systems. The estimates are based upon the percentage of soils in a given county that meet the Department criteria for requiring secondary treatment. It is important to note that the Department analysis looked specifically at the percentage of soils meeting the set criteria and then multiplied this percentage by the number of new septic permits issued in 2001 for that county.

The Department analysis did not use the number of permits issued in soils that meet the criteria of the new rule (this data is not readily available statewide.) This may increase the cost of this provision statewide. For example, a recent Purdue University research project plotted the location of all new septic permits in Elkhart County for a given year. This project found that 66% of all new septic permits issued in Elkhart County were in soils that do not meet the nitrate absorption requirements. However, this study did not apply the second criteria of the rule that may have reduced this percentage. The Department assumed that 24.93% of new permits would be affected in its analysis. The difference between these estimates represents approximately 283 permits, or $3.1 M to $4.1 M in additional cost. The actual number of permits affected is assumed to be somewhere between these two figures. It is assumed that with better data that a more thorough and accurate analysis could be performed. ***Estimated Cost:*** Range from $10.4 M to $15 M for residential and $200,000

to $706,000 for commercial. Monitoring and maintenance costs are estimated at between $345,000 and $430,000 for residential per year and $6,400 to an unknown amount for commercial. The costs of this provision may be higher or lower depending upon the location of new development within the state and system design requirements. New commercial systems may be considerably more expensive than the costs used in this analysis. If new development clusters in areas that have soils with poor nitrate absorption, the cost could be considerably higher. In addition, the extent of this impact is contingent upon market competition and other factors.

(3) Septic Tank Modification Costs: The proposed rules require the use of two-compartment septic tanks. Current regulations only require the use of a single-compartment septic tank. Manufacturers of septic tanks will have to modify or build new forms for casting two-compartment septic tanks. According to the Department's website, there are currently 53 in-state and 12 out-of-state certified septic tank manufacturers. These 65 manufacturers produce a total of 187 single-compartment septic tanks that would have to be modified for use in Indiana. The Department estimates that the forms for these tanks could be modified at a cost of $500 each to make two-compartment tanks. Industry representatives state that it is more likely that companies would either purchase or make new forms for two-compartment septic tanks. According to industry representatives, the cost of making a new form ranges from $12,500 to $22,500. ***Estimated Cost:*** Range from $76,500 to $3.4 M for in-state manufacturers and from $17,000 to $800,000 for out-of-state manufacturers. Total costs range from $93,500 to $4.2 M. The costs of this provision will likely be passed on to consumers in the form of higher prices. The extent of this impact is contingent upon market competition and other factors. Item (1) already includes the cost of additional material for two-compartment septic tanks, but does not include any cost for new forms.

Background: Department staff estimate that between 60% and 75% of all septic systems require perimeter drains and that between 75% and 80% of all systems are gravity-flow or flood-dosed septic systems. The Department estimates that 14,000 new residential and 450 new commercial septic tanks are purchased annually.

Information Sources: Alan Dunn, Indiana State Department of Health, 317-233-7179; Brad Lee, Purdue University, 765-496-6884; Marlie Pedtke, Indiana Builders Association, 317-283-4266; Bob Watkins, Elkhart County Environmental Health Department, 517-875-3391; Stuart Meade, Meade Septic Designs, 574-533-1470; Kevin Chaffee, Earthtek Environmental Systems, 812-934-5035; Mike Robertson, Earthtek Environmental Systems, 812-934-5035; Joe Schaeffer, Midwest Tile and Concrete, 260-749-5173; John Crist, Hartford Concrete Products, 765-348-3506; Terry Herschberger, Indiana Builders Association, Septic Committee, 574-825-1579; Brad Boyer, PM & Associates, 317-849-0641 ext. 203; Scott Rexroth, PM & Associates, 317-849-0641 ext. 204; Tim Andrews, Press-Seal Gasket Corporation, 1-800-348-7325; Ronnie Boehm, Department of Natural Resources, 812-482-1171 ext. 3; Indiana State Department of Health, *Fiscal Impact Statement Proposed Rule 410 IAC 6-8.2 LSA Document #02-321*, and *Sanitary Engineering List of Approved Septic Tanks Effective May 2002.*